

FIG. 1A
 (Prior Art)

WHITE DISPLAY
 (VOLTAGE NOT APPLIED)

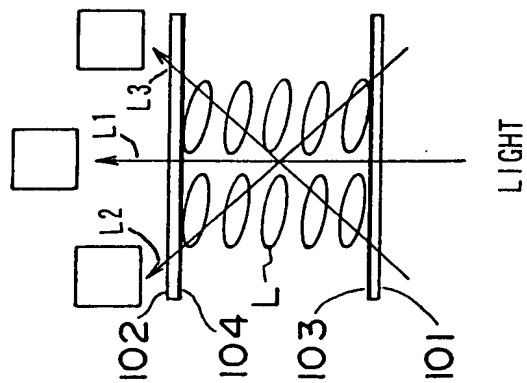


FIG. 1B
 (Prior Art)

HALF TONE DISPLAY
 (VOLTAGE V_1)

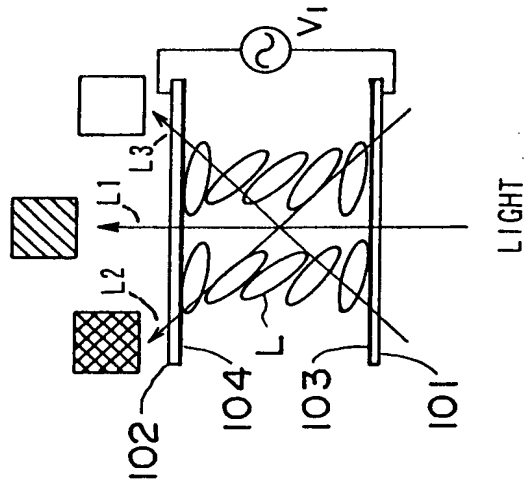


FIG. 1C
 (Prior Art)

BLACK DISPLAY
 (VOLTAGE V_2)

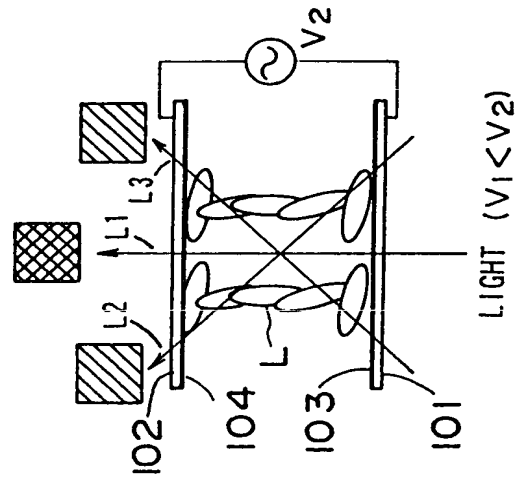


FIG. 2A

(Prior Art)

BLACK DISPLAY
(VOLTAGE NOT APPLIED)

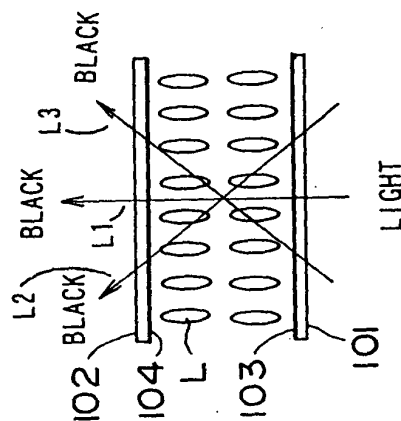


FIG. 2B

(Prior Art)

HALF TONE DISPLAY
(VOLTAGE V_1)

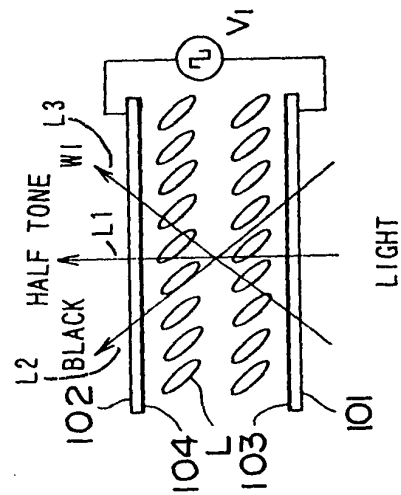


FIG. 2C

(Prior Art)

WHITE DISPLAY
(VOLTAGE V_2)

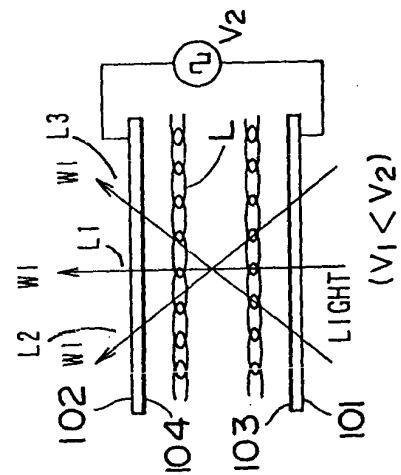


FIG. 3A
(Prior Art)

BLACK DISPLAY
(VOLTAGE NOT APPLIED)

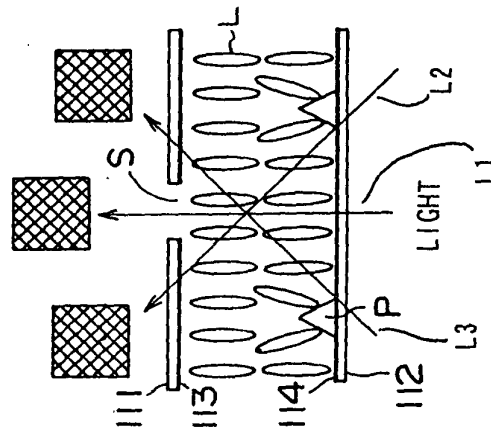


FIG. 3B
(Prior Art)

HALF TONE DISPLAY
(VOLTAGE V_1)

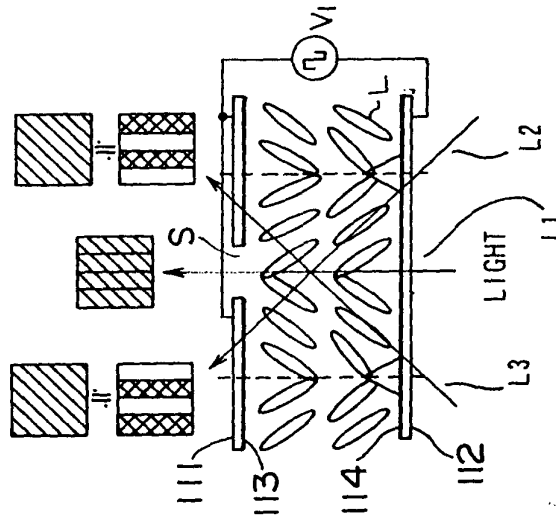


FIG. 3C
(Prior Art)

WHITE DISPLAY
(VOLTAGE V_2)

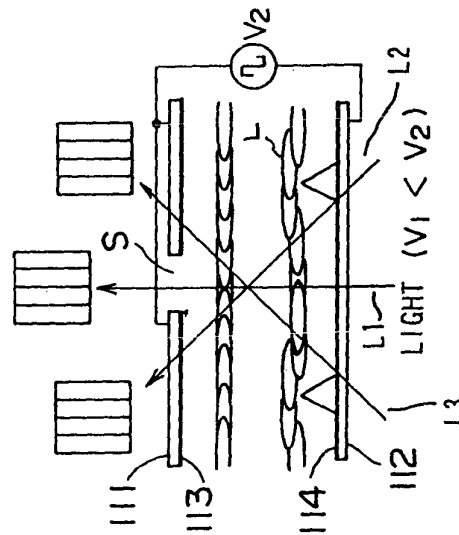


FIG. 4A
(Prior Art)

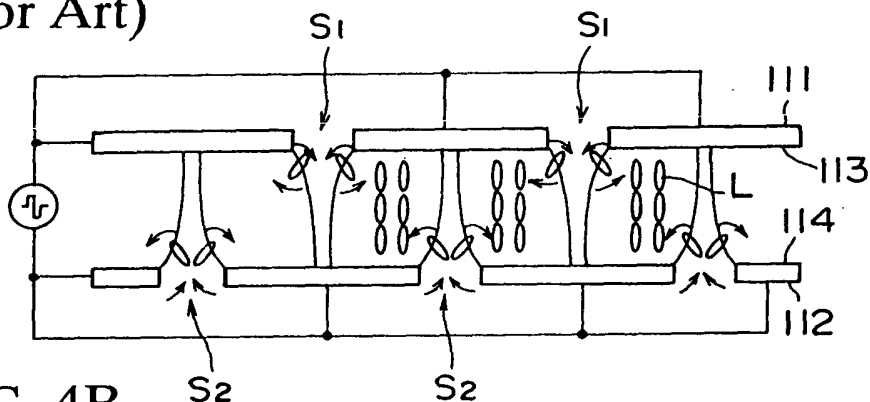


FIG. 4B
(Prior Art)

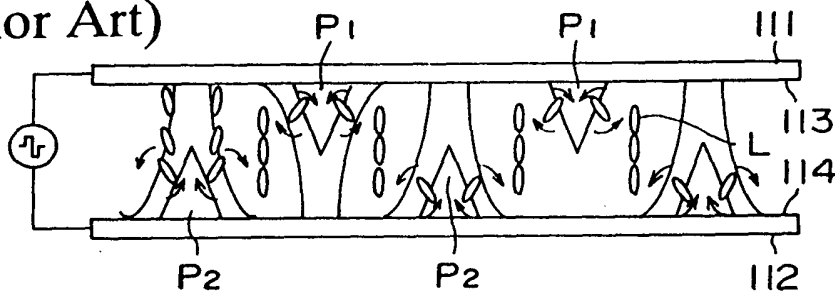


FIG. 4C
(Prior Art)

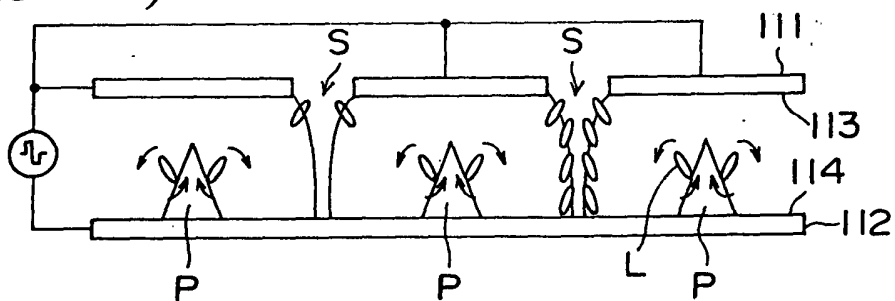


FIG. 5 (Prior Art)

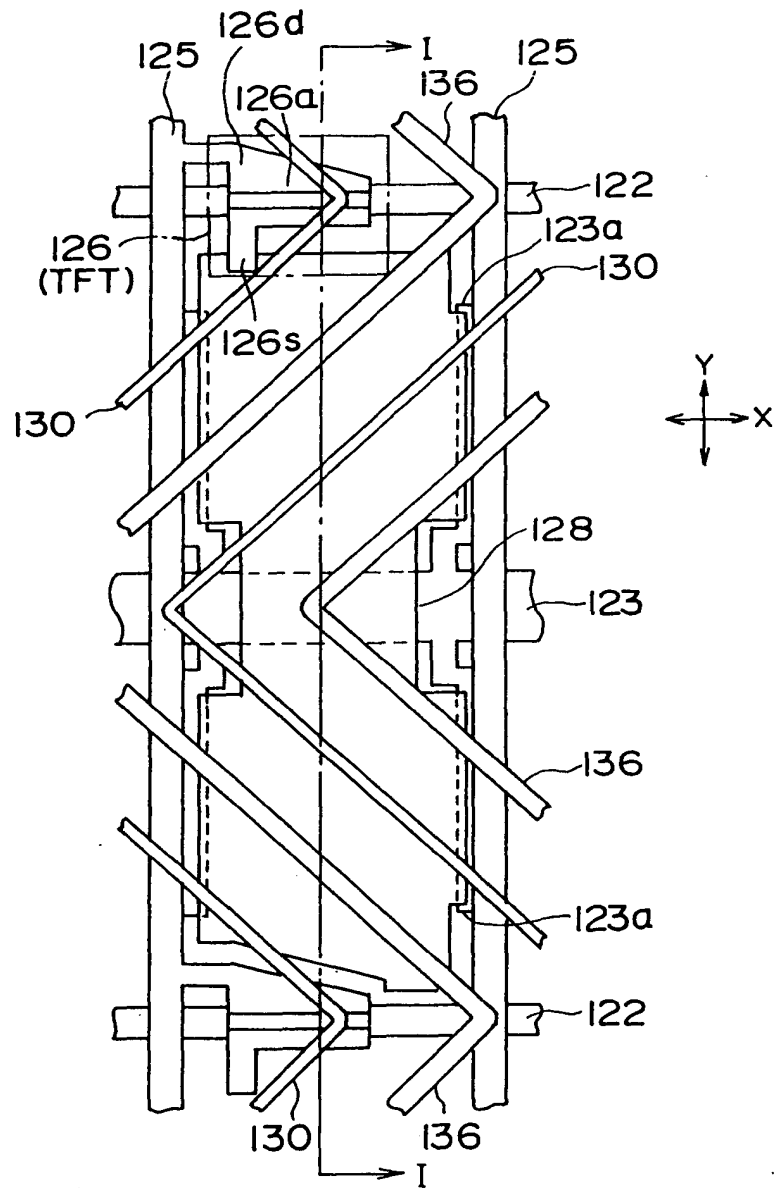


FIG. 7 (Prior Art)

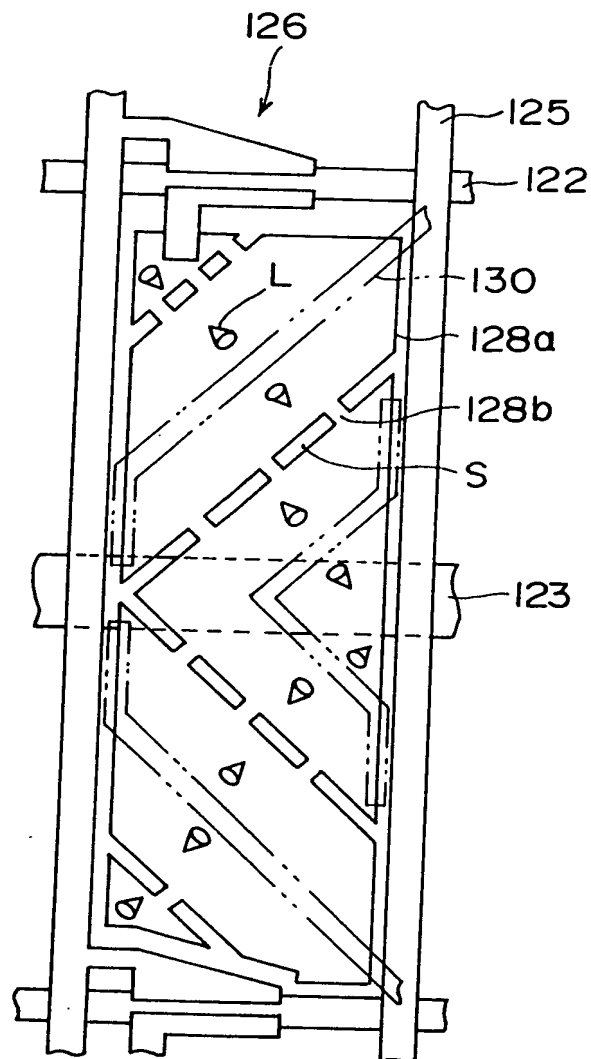


FIG. 8 (Prior Art)

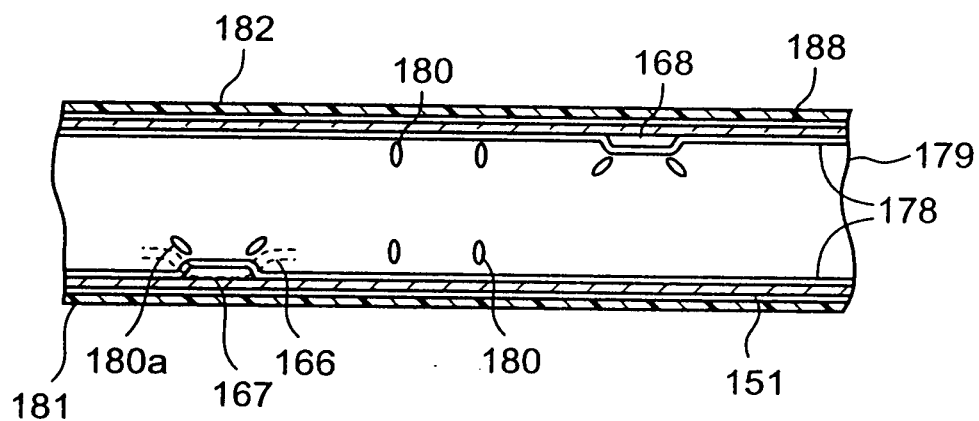


FIG. 9A (Prior Art)

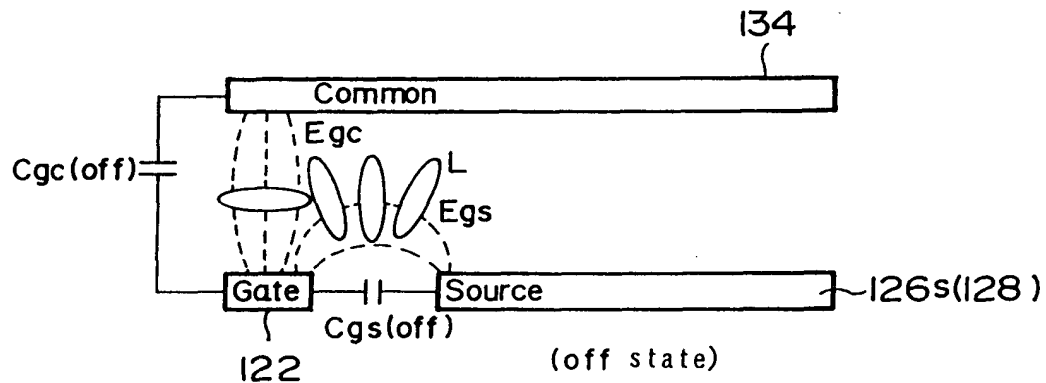
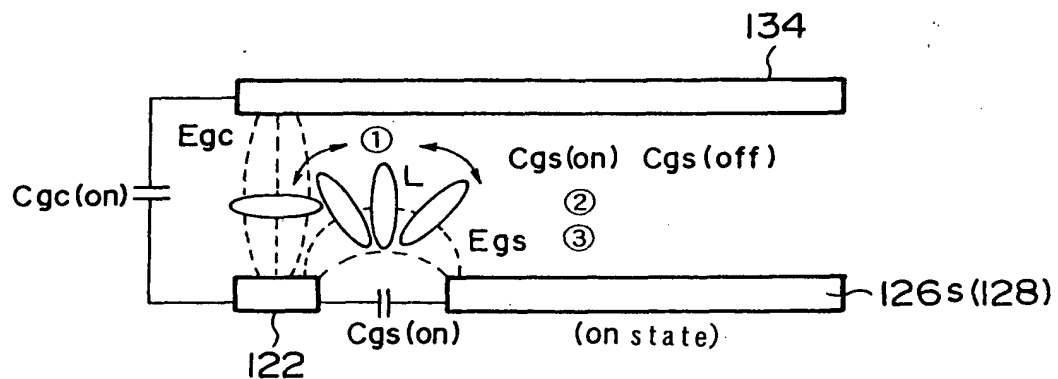


FIG. 9B (Prior Art)

- ① A tilt angle of a liquid crystal molecule is changed in response to a voltage.



- ② A capacitance is changed by the tone.
③ A capacitance is also changed by light irradiation.

FIG. 10A (Prior Art)

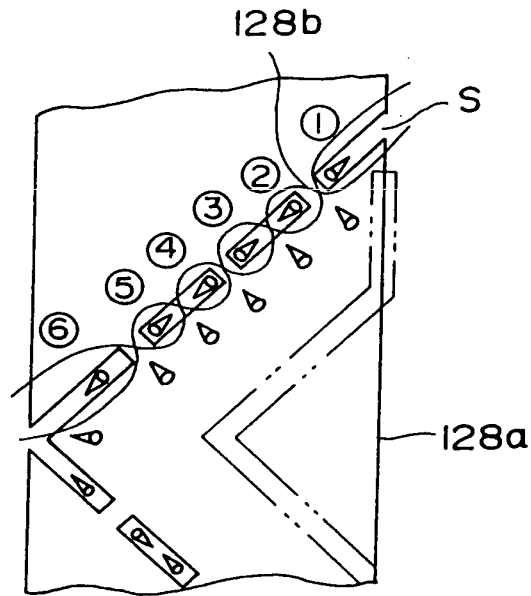


FIG. 10B (Prior Art)

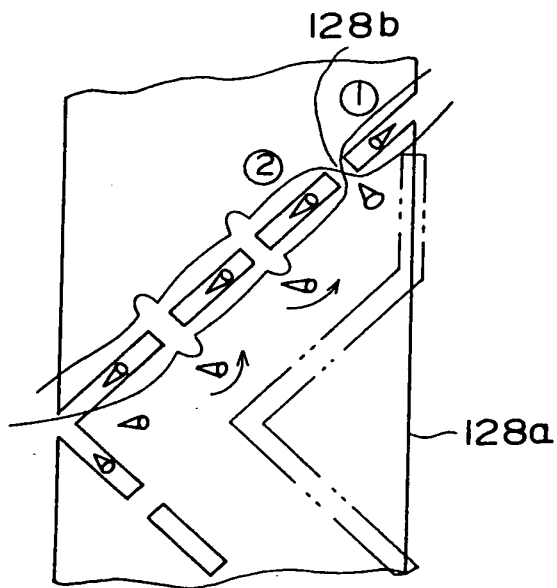


FIG. 11
(Prior Art)

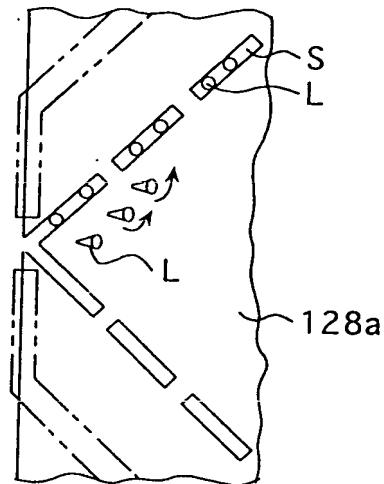


FIG. 12
(Prior Art)

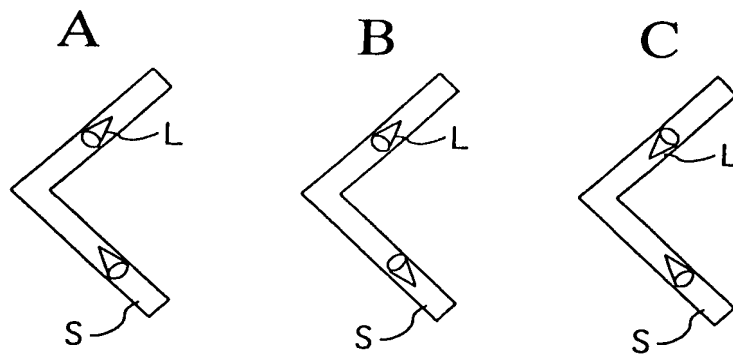


FIG. 13
(Prior Art)

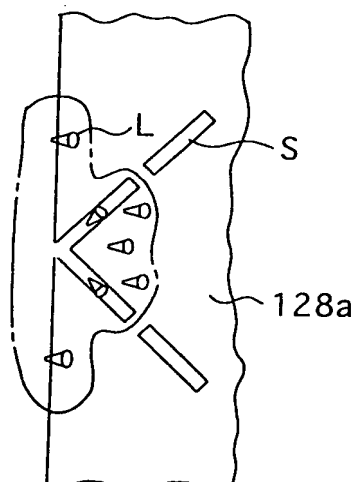


FIG. 14A (Prior Art)

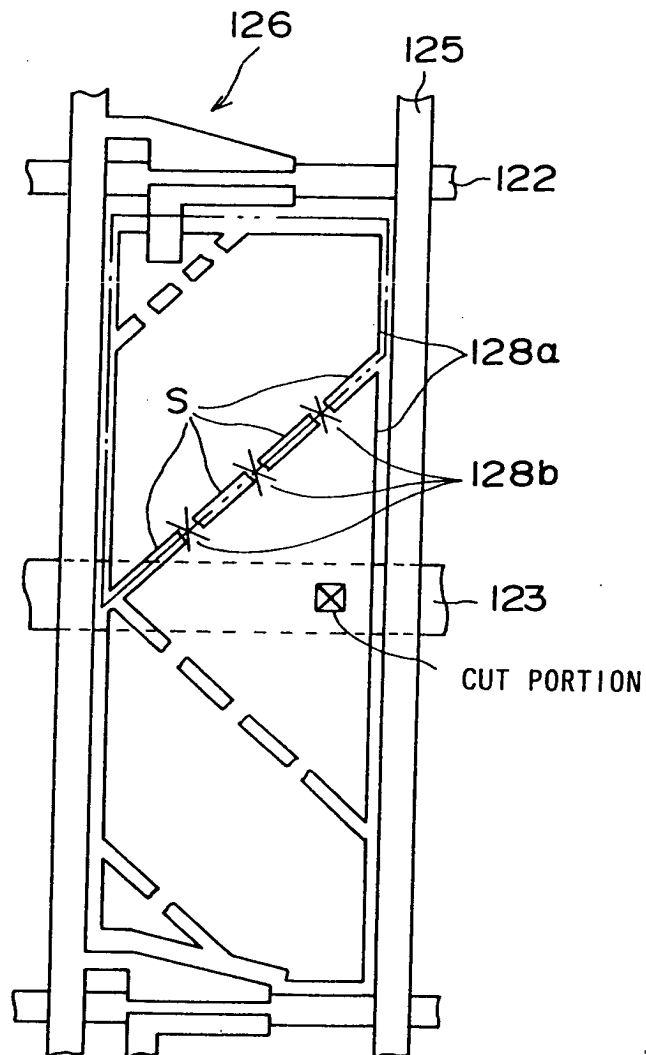


FIG. 14B

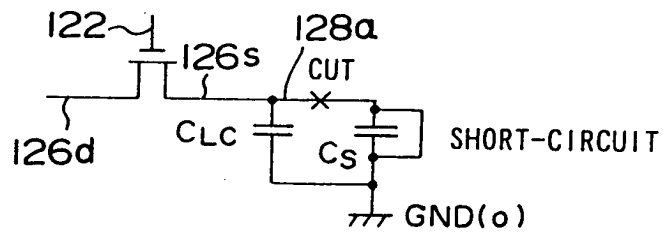


FIG. 15

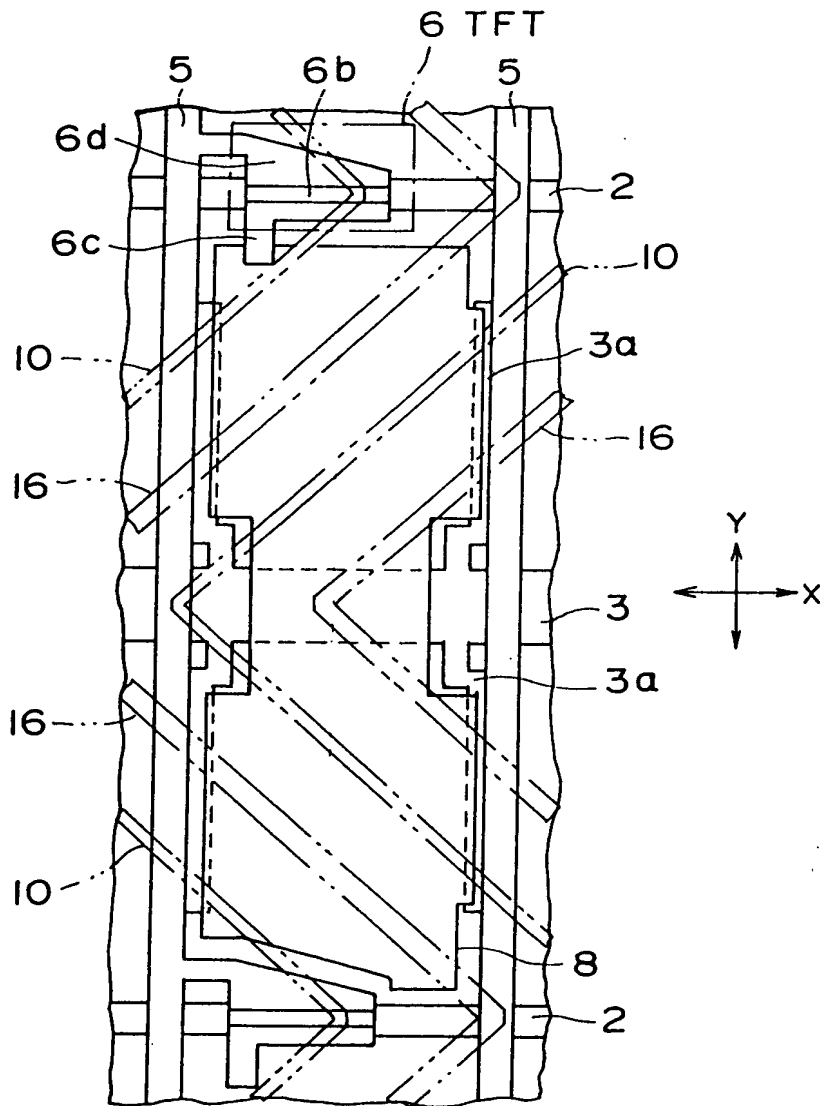
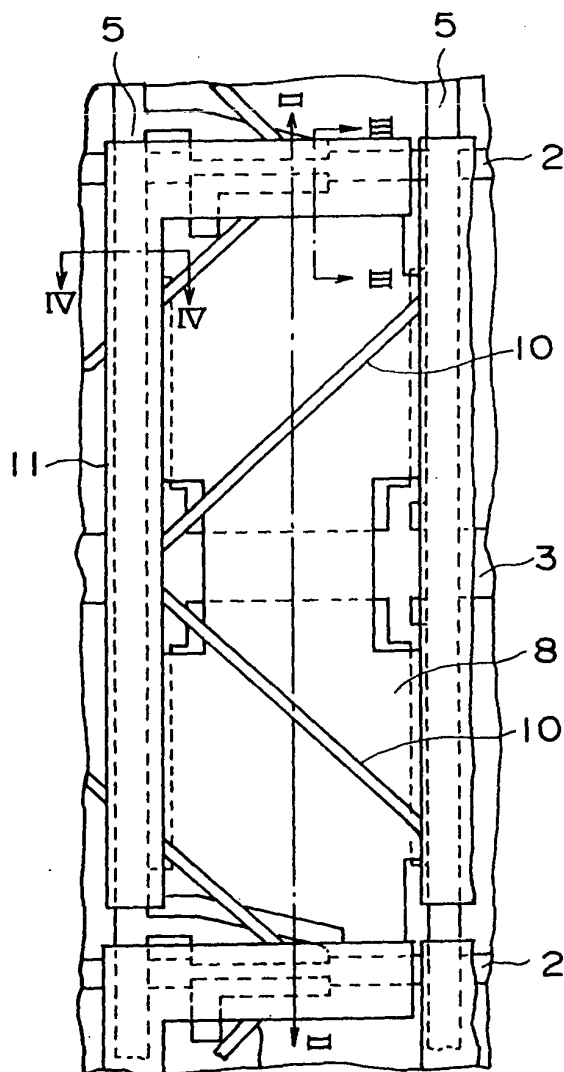


FIG. 16



A detailed cross-sectional diagram of a semiconductor device. The structure consists of several horizontal layers. At the top, there are layers labeled 12, 13, 14, 15, and 17. Below these is a large central cavity or well labeled 18. Within this cavity, there is a rectangular block labeled 11. To the left of block 11, there is a small protrusion labeled 8. Below the main body of the device, there are more layers labeled 6a, 2, 6b, 6c, 6d, 4, and 1 at the very bottom. A specific feature on the right side of the lower section is labeled 7. Various hatching patterns are used throughout the diagram to represent different materials or regions.

Fig. 1 is a cross-sectional view of a semiconductor device. It shows a substrate (1) with a top layer (18) and a central region (11) containing a structure (5) with a top layer (8) and a bottom layer (4).

FIG. 20A

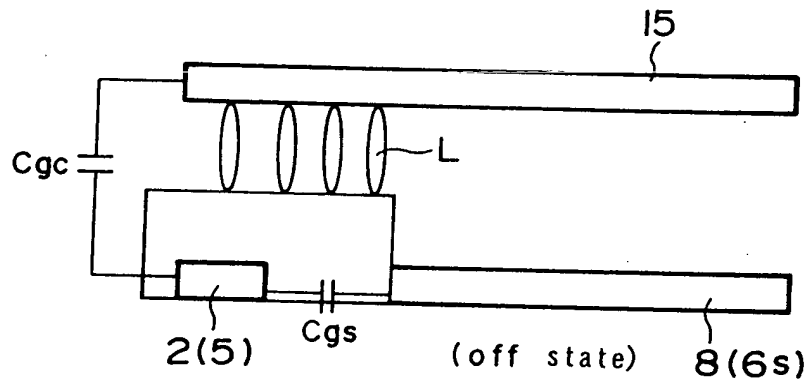


FIG. 20B

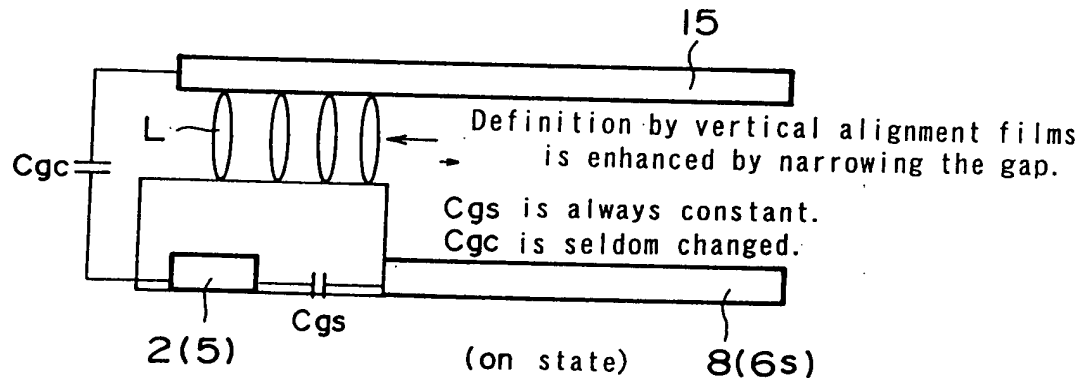


FIG. 21

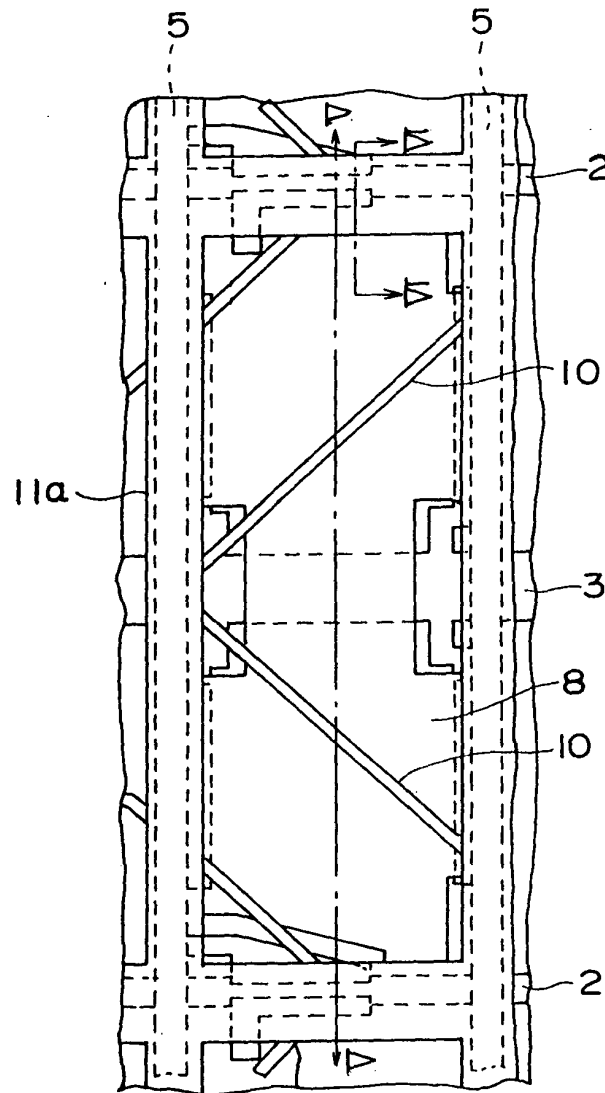


FIG. 22

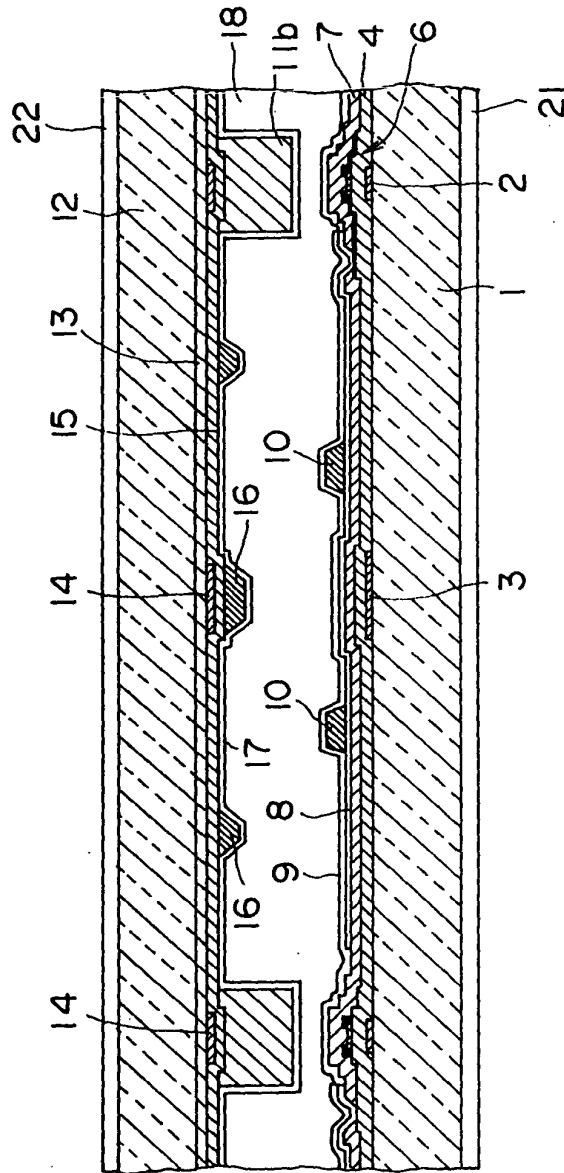


FIG. 23

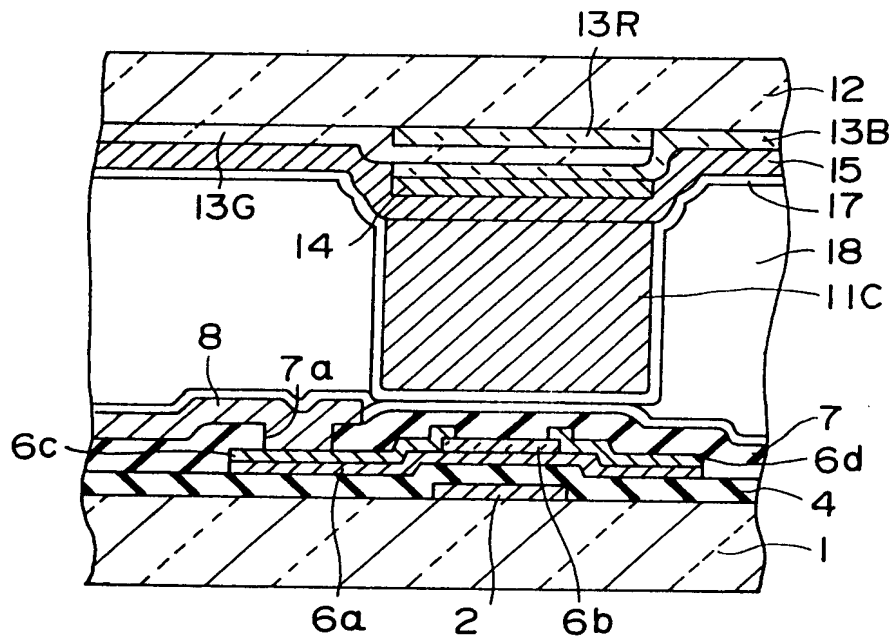


FIG. 24

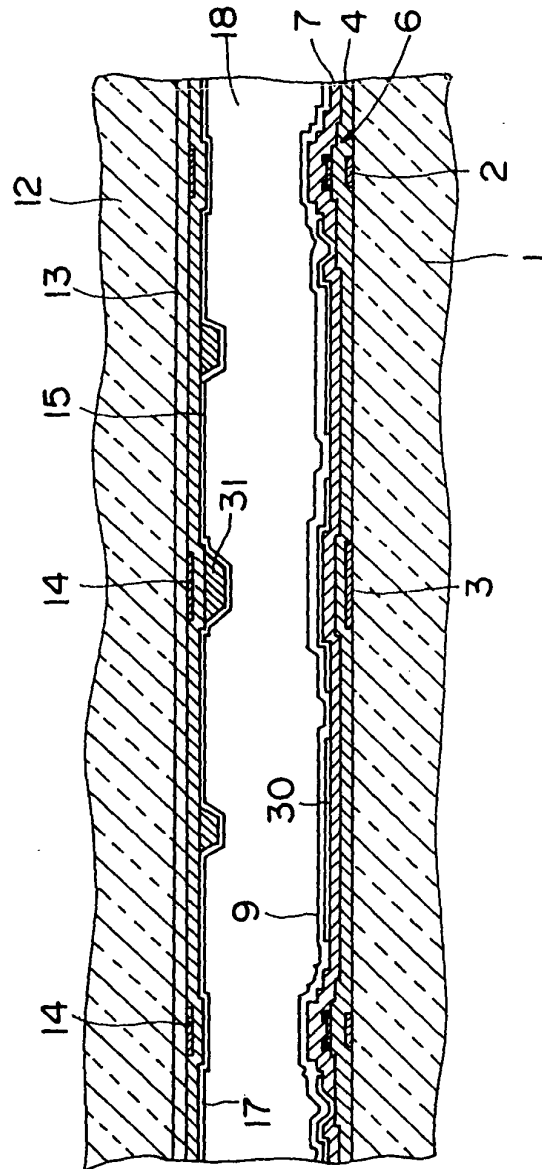


FIG. 26A

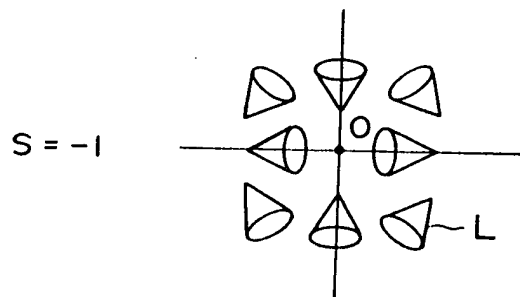
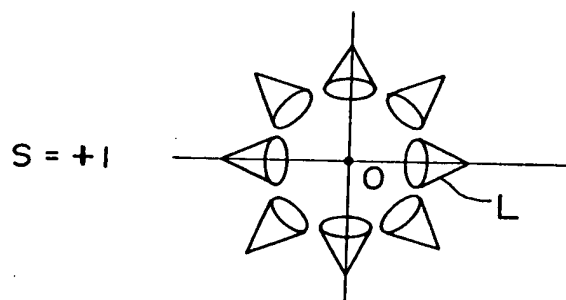


FIG. 26B



[illegible]

A cross-sectional view of a semiconductor device. The bottom part shows a substrate 1 with a layer 9. Above layer 9 are regions 17 and 33. Region 33 contains structures 34 and 34a. Layer 12 is at the top, with layers 13 and 15 below it.

FIG. 29

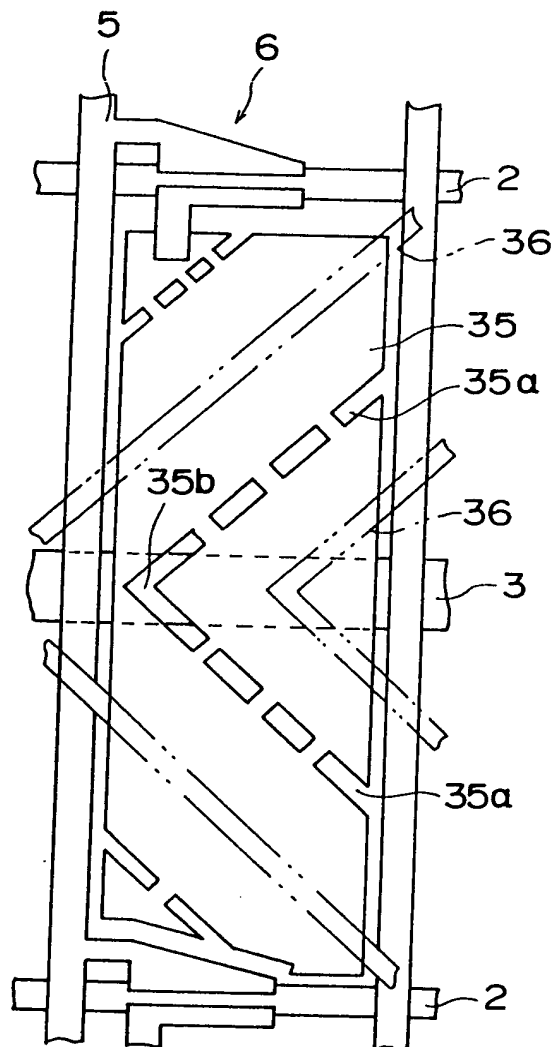


FIG. 30

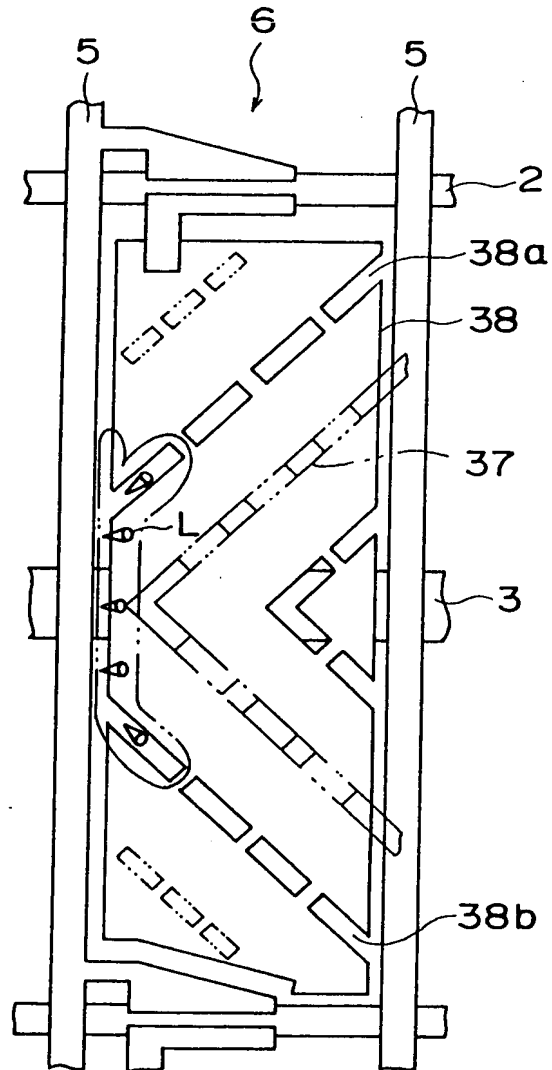


FIG. 31A

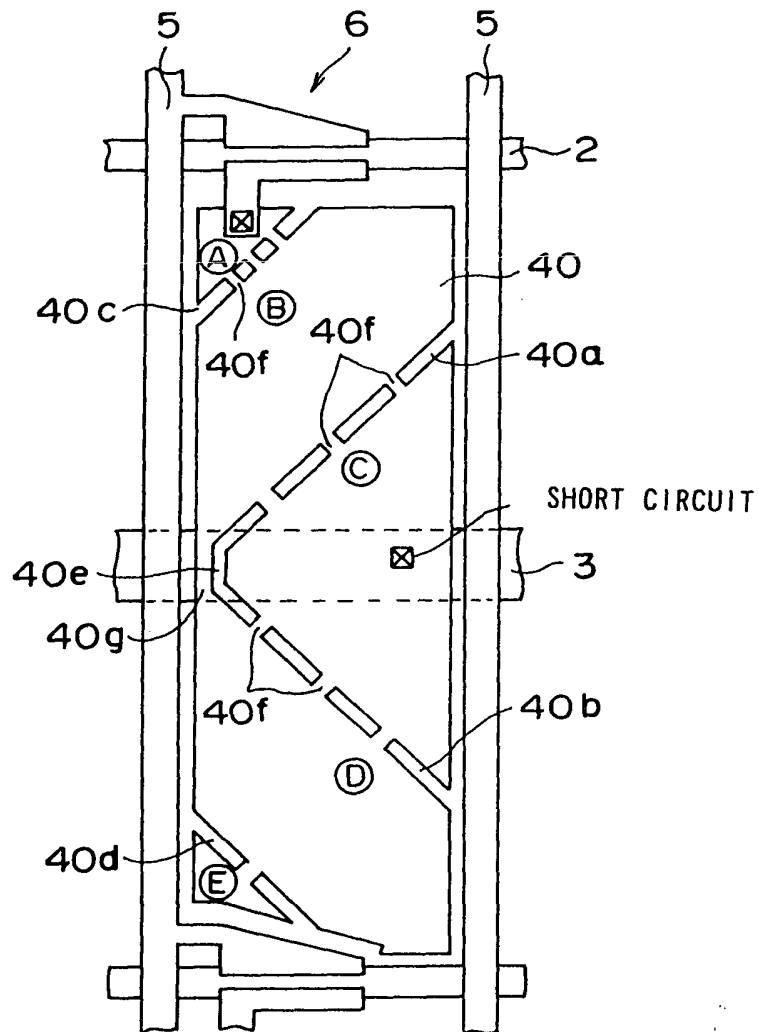


FIG. 31B

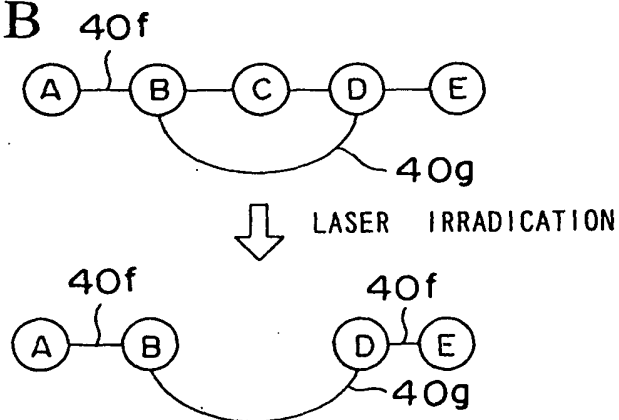


FIG. 32A

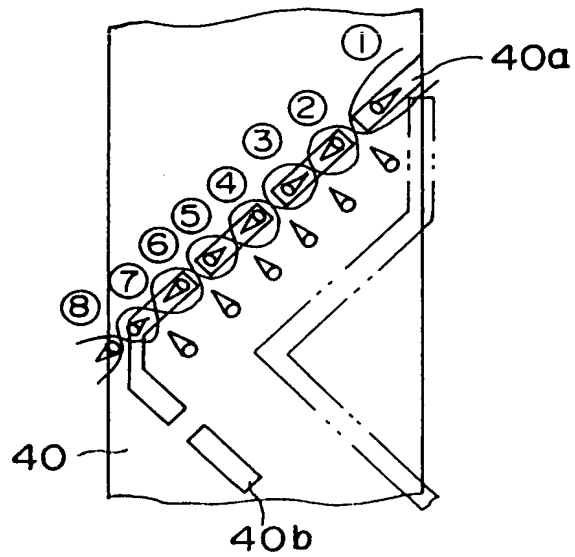


FIG. 32B

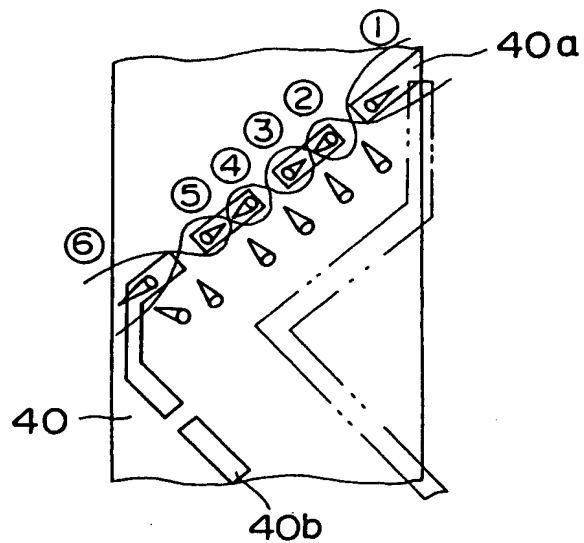


FIG. 33

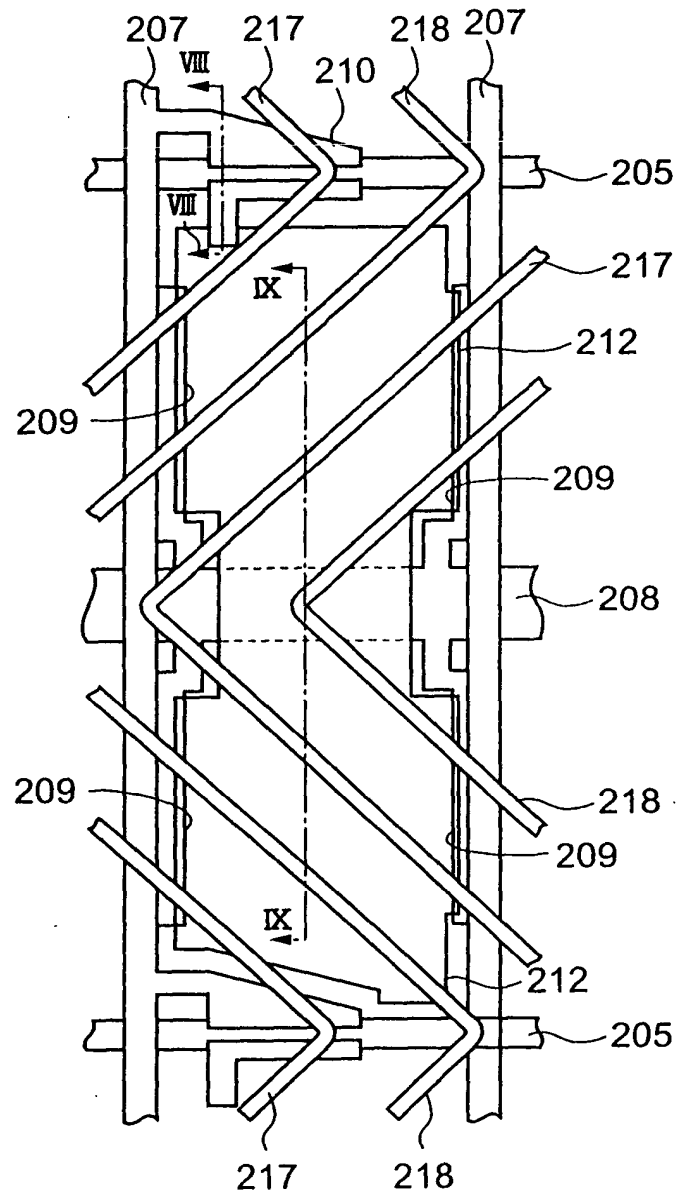


FIG. 34

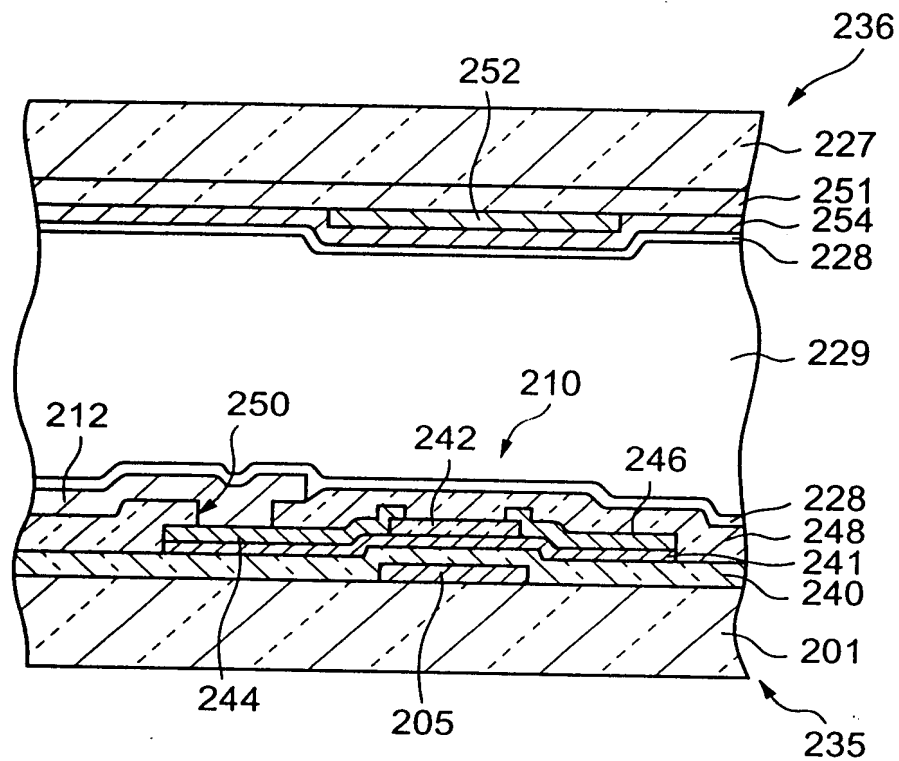


FIG. 35

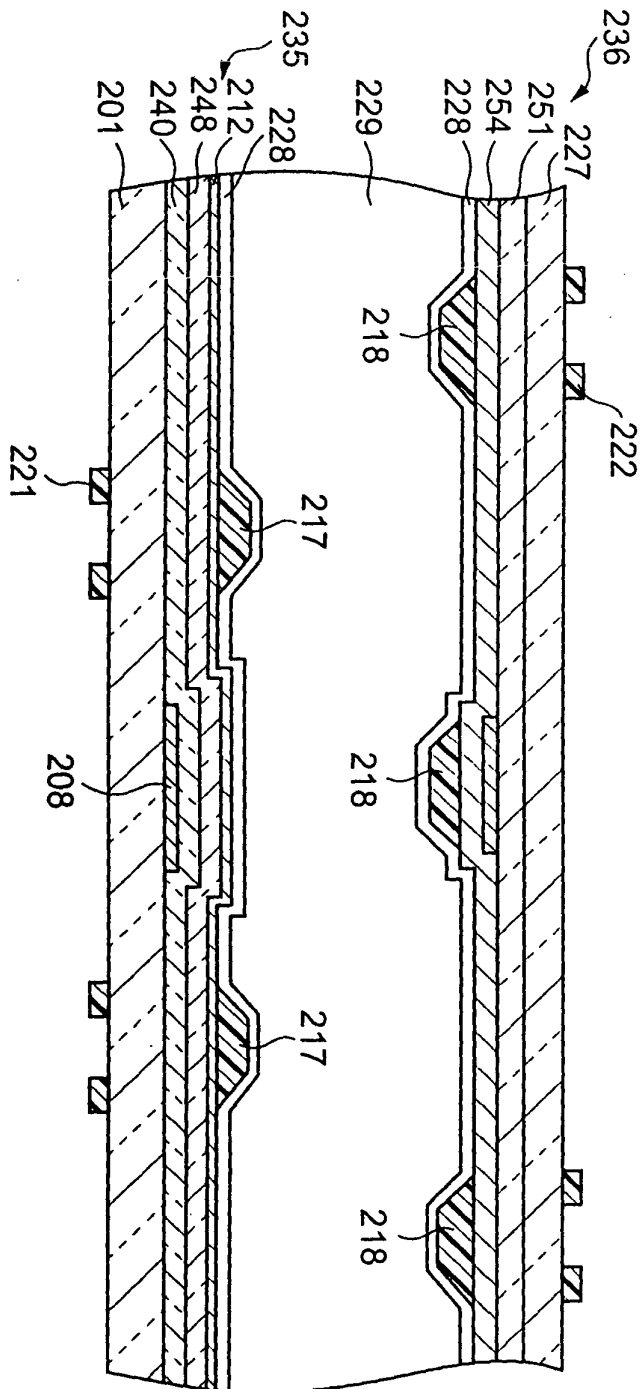


FIG. 36

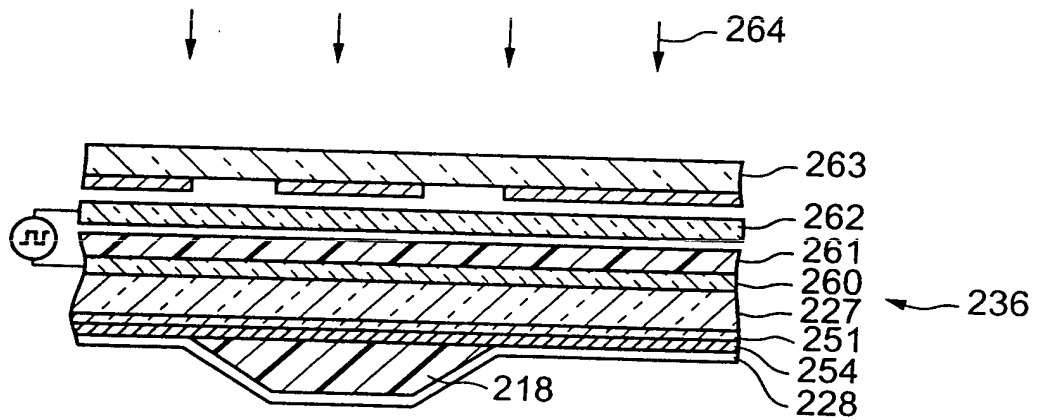


FIG. 37

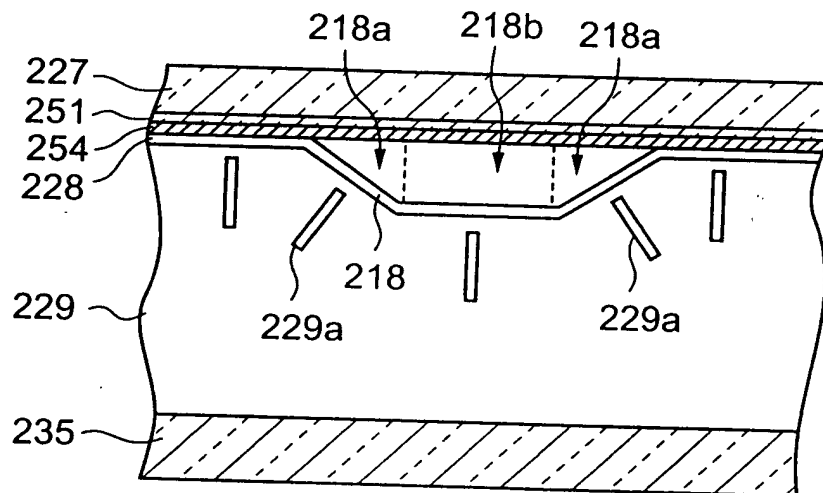


FIG. 38

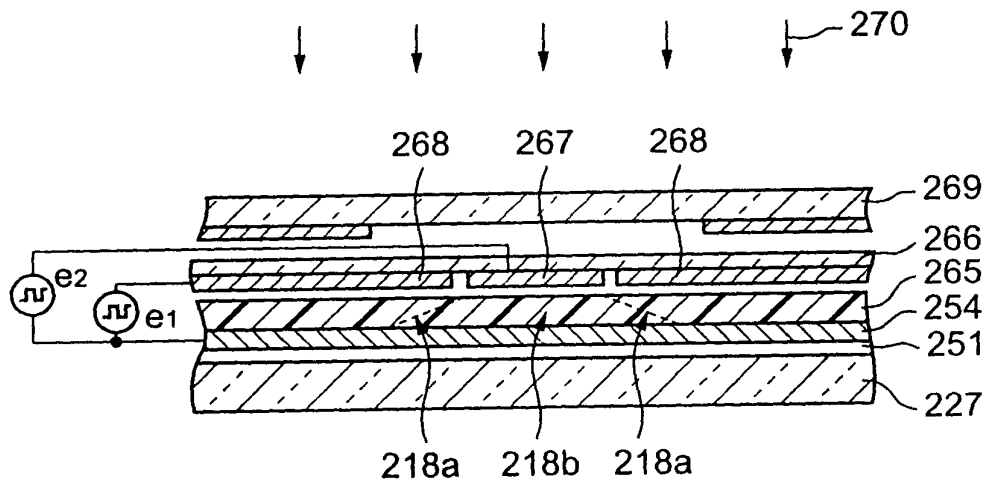


FIG. 39A

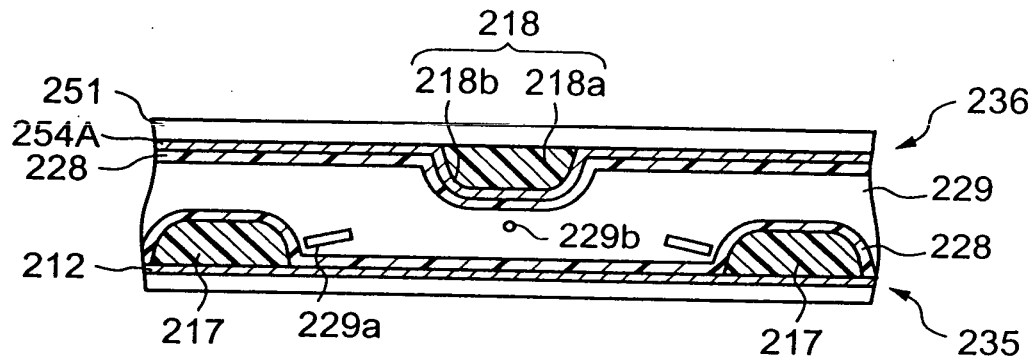


FIG. 39B

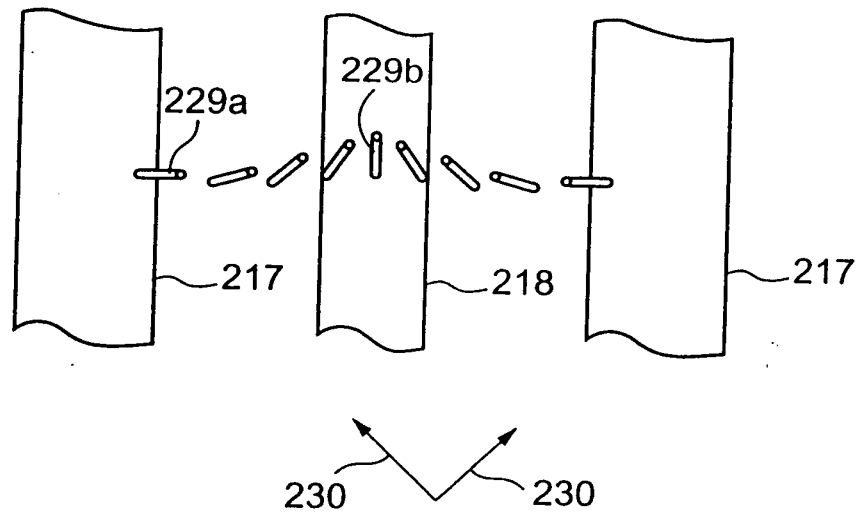


FIG. 40

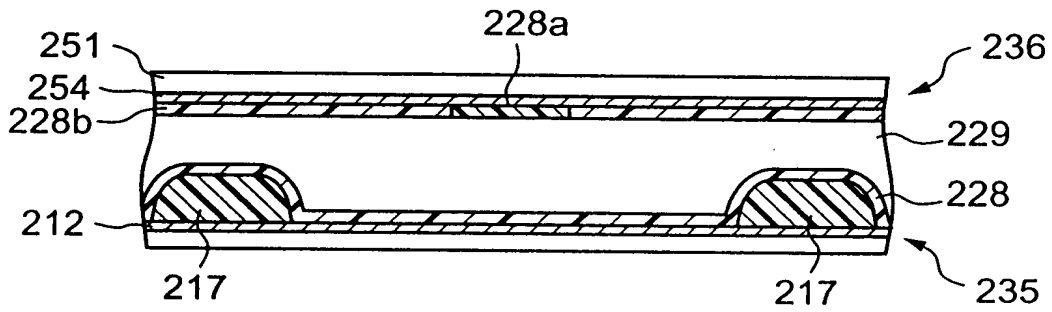


FIG. 41A

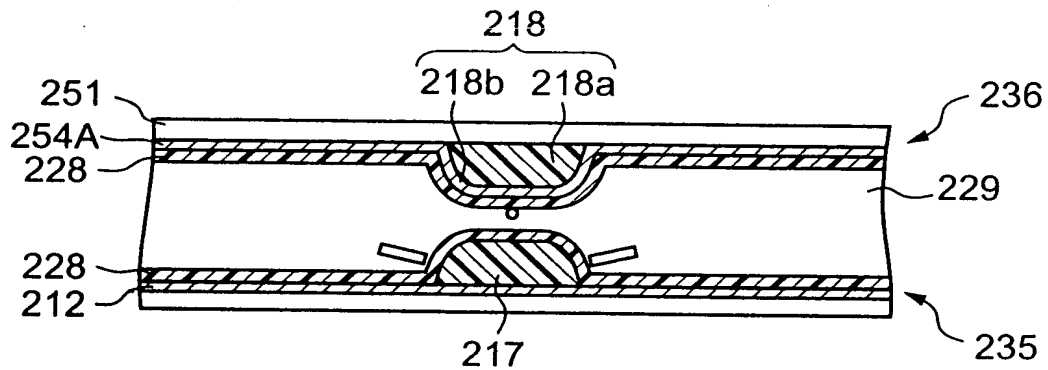


FIG. 41B

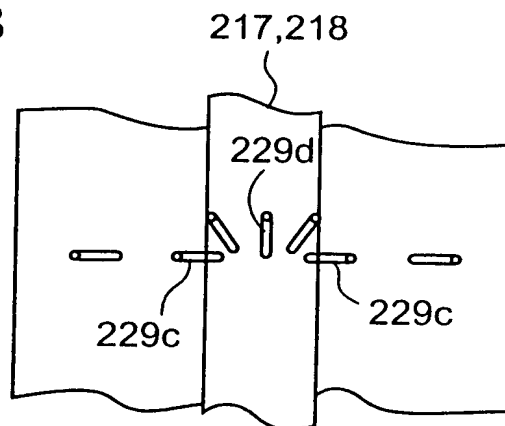


FIG. 42

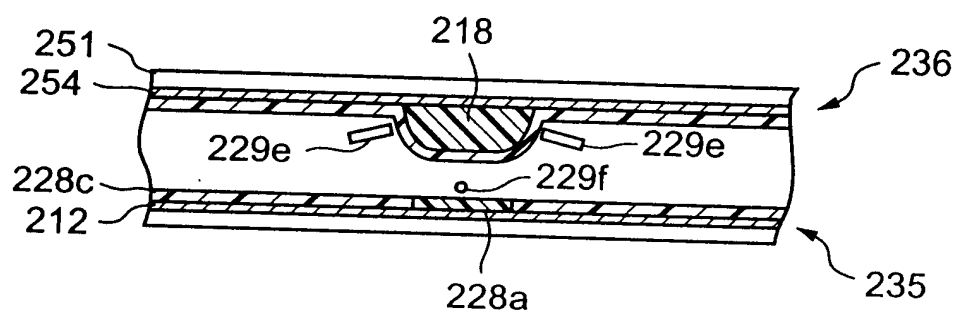


FIG. 43

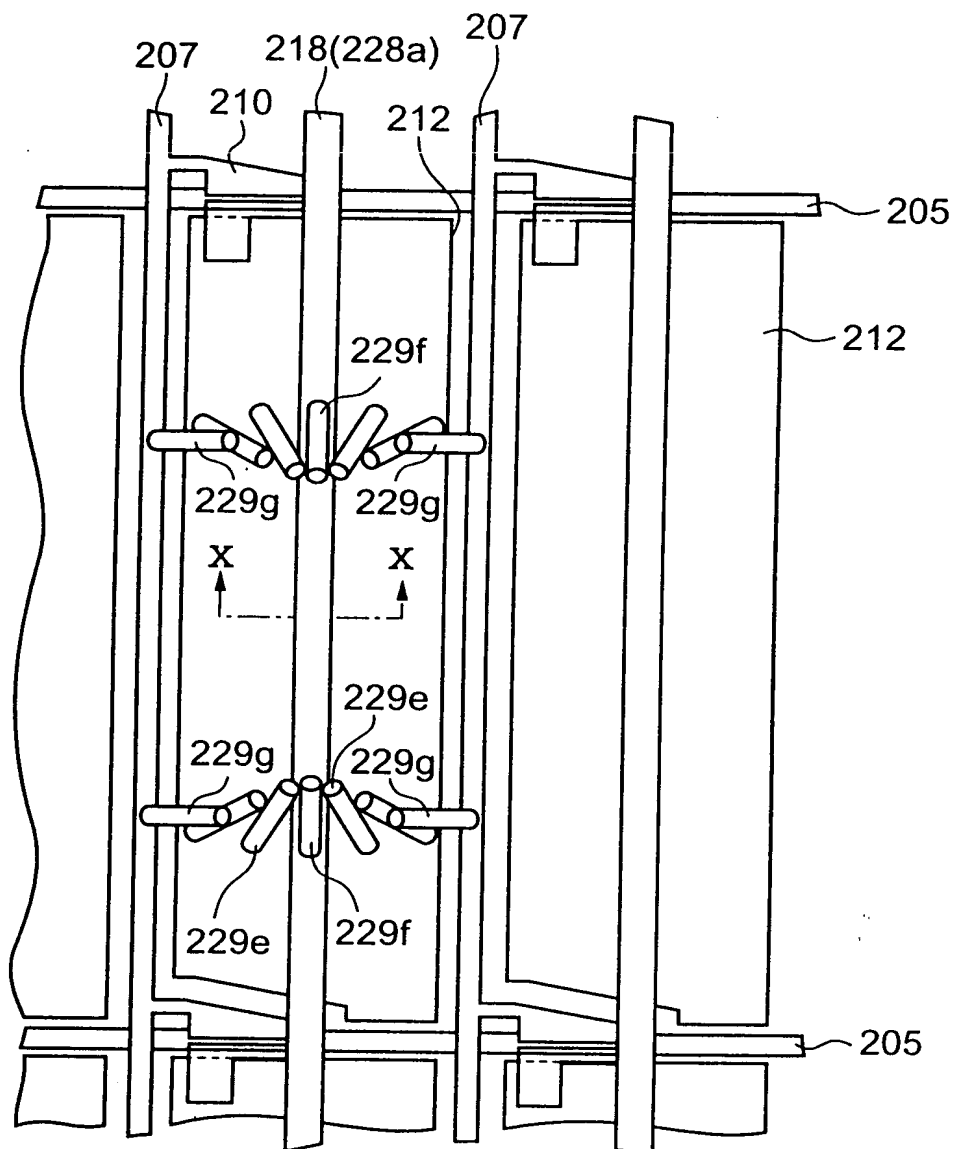


FIG. 44

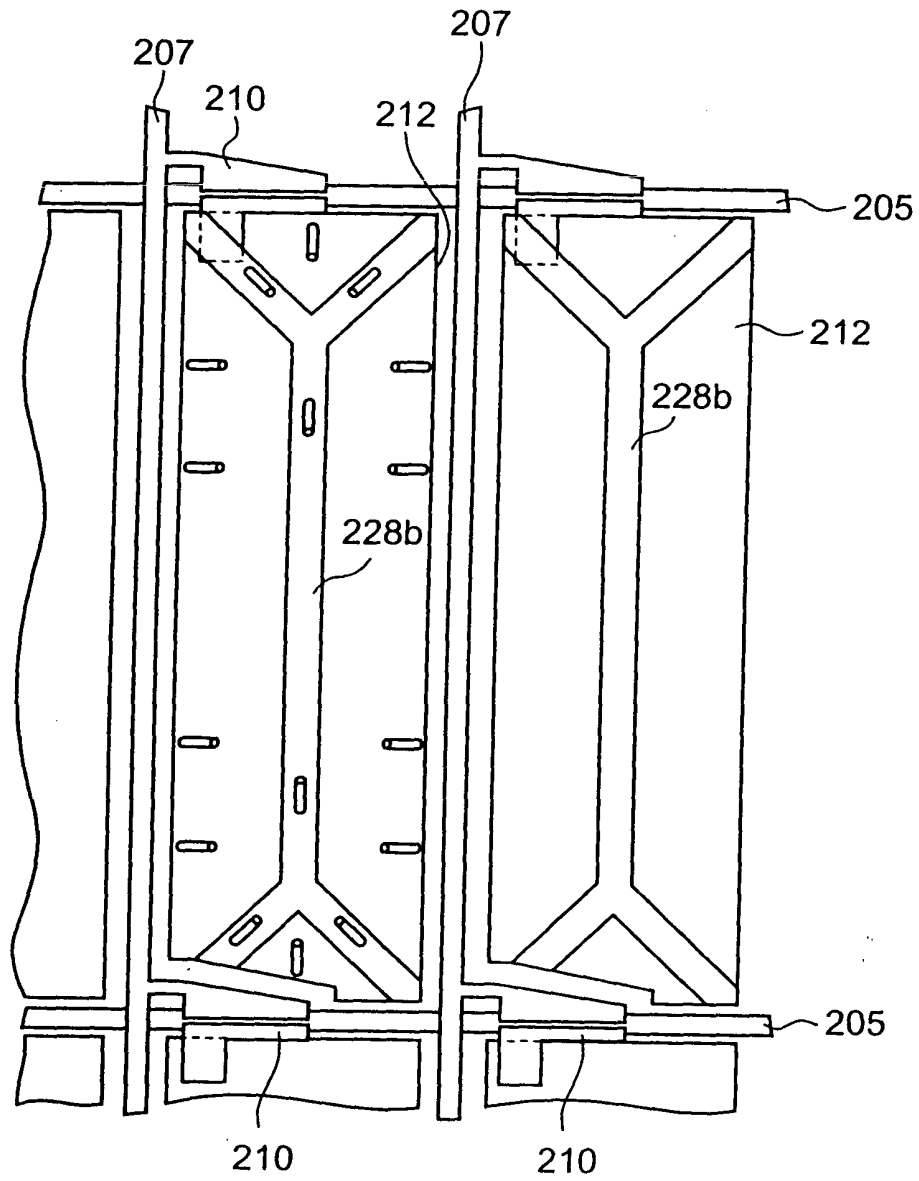


FIG. 45A

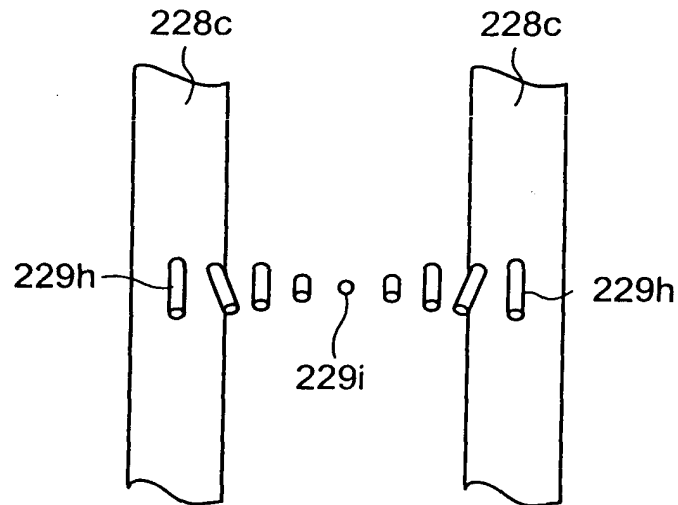


FIG. 45B

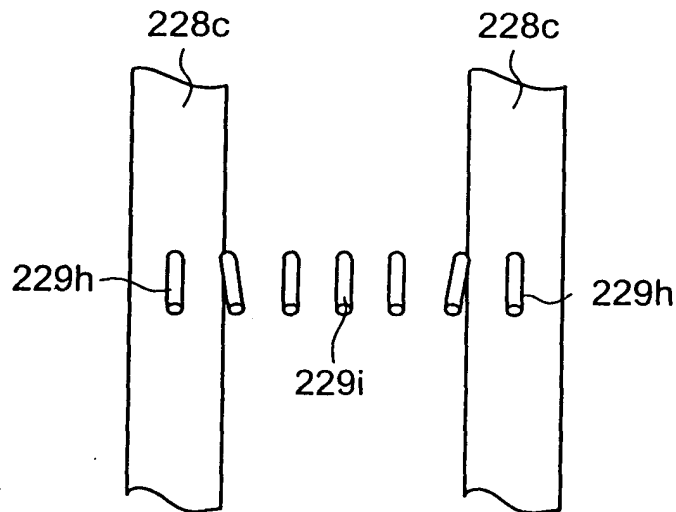


FIG. 46

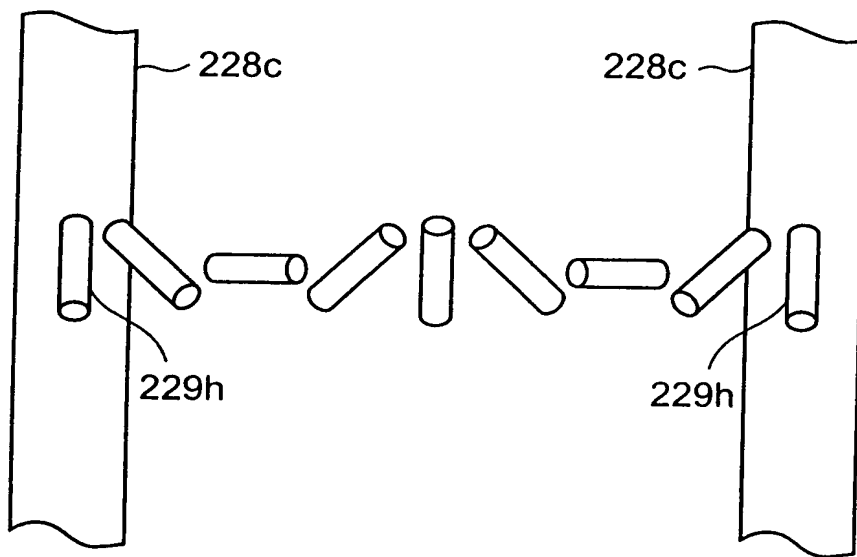


FIG. 47

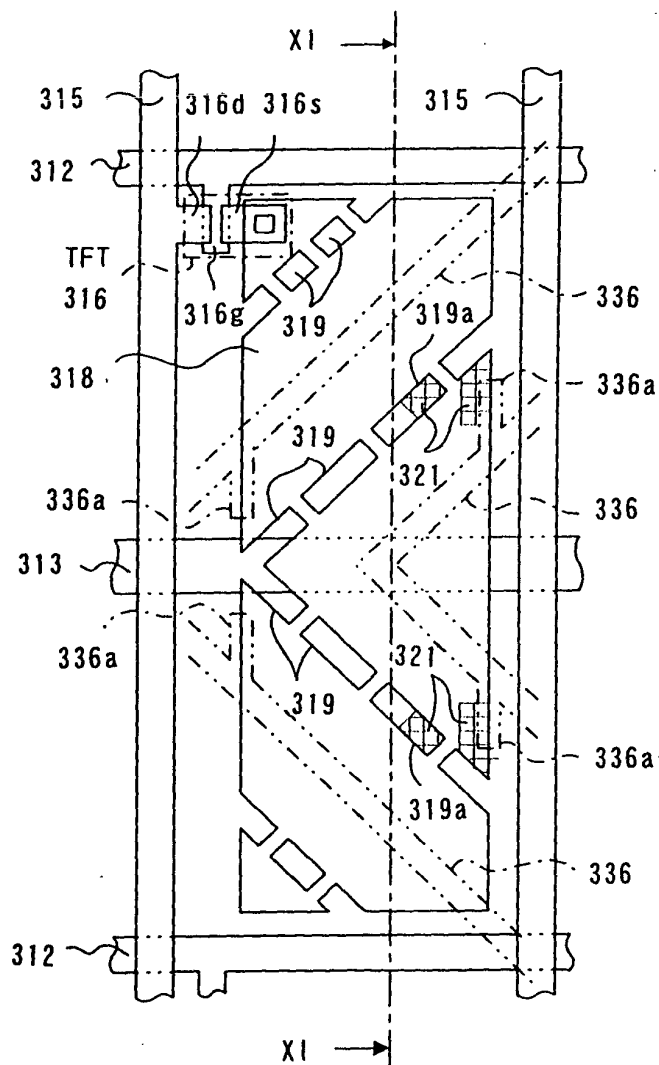


FIG. 48

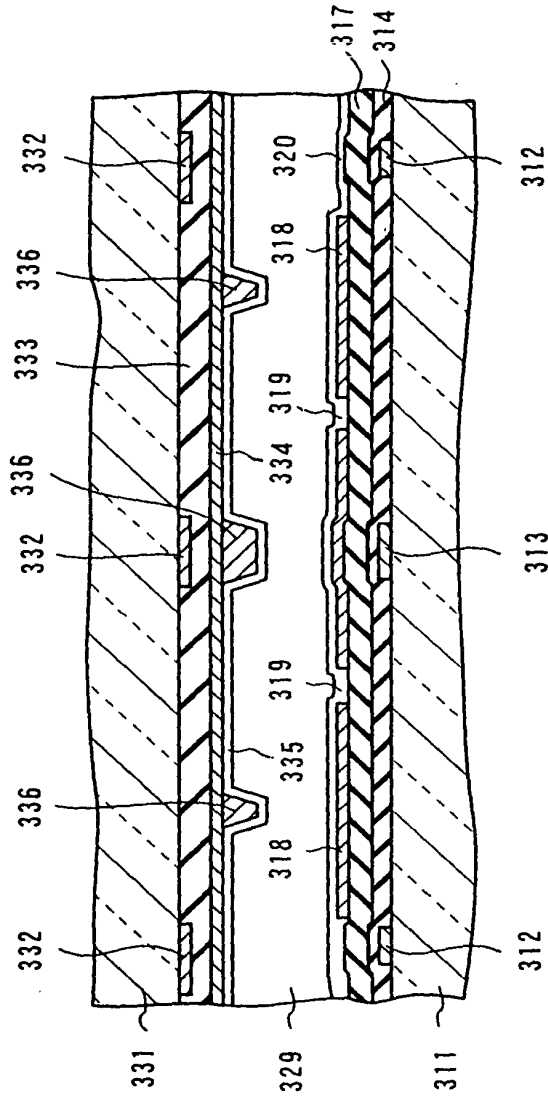


FIG. 49

ALIGNMENT OF LIQUID CRYSTAL MOLECULES
(NO POSITIONAL DISPLACEMENT)

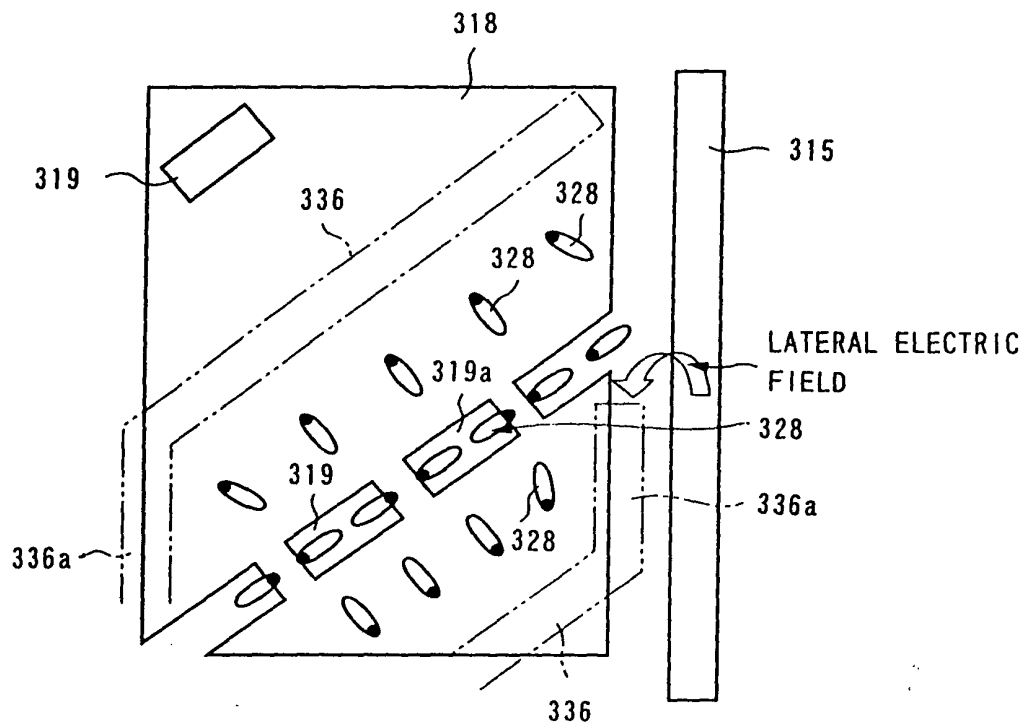


FIG. 50

ALIGNMENT OF LIQUID CRYSTAL MOLECULES
(POSITIONAL DISPLACEMENT)

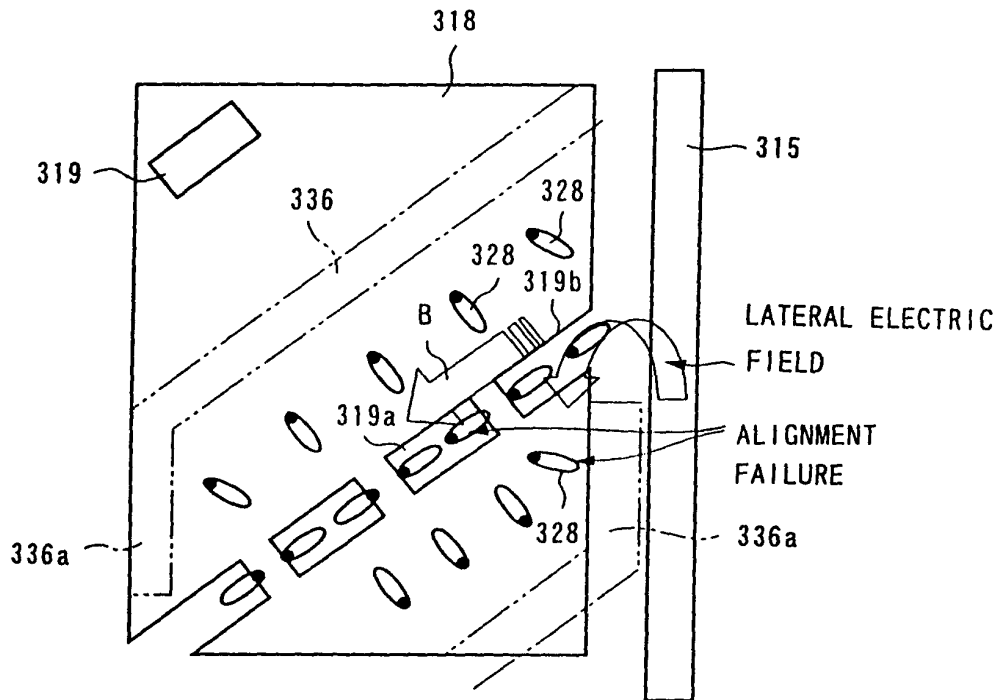


FIG. 51

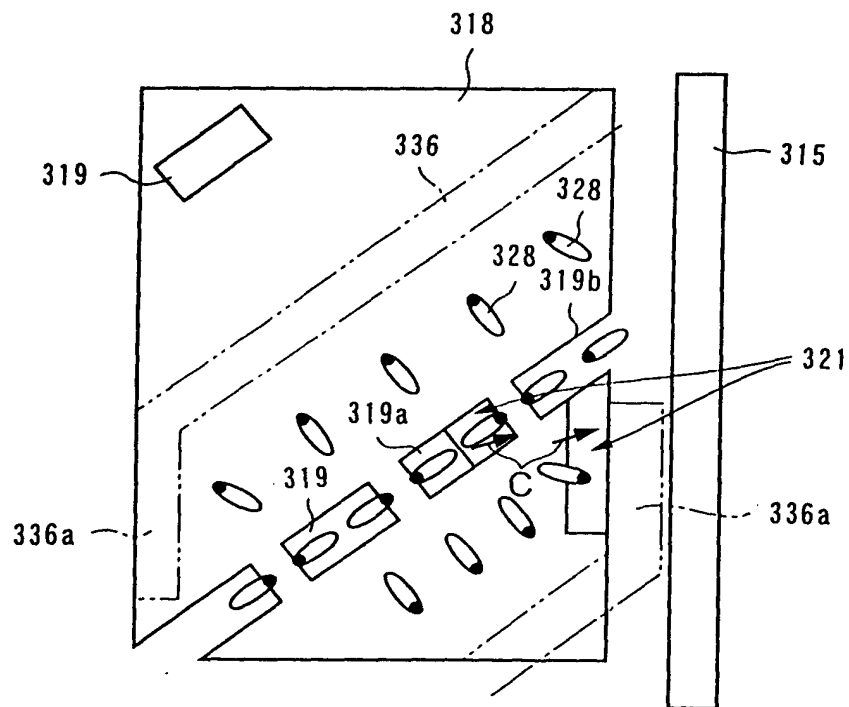


FIG. 52

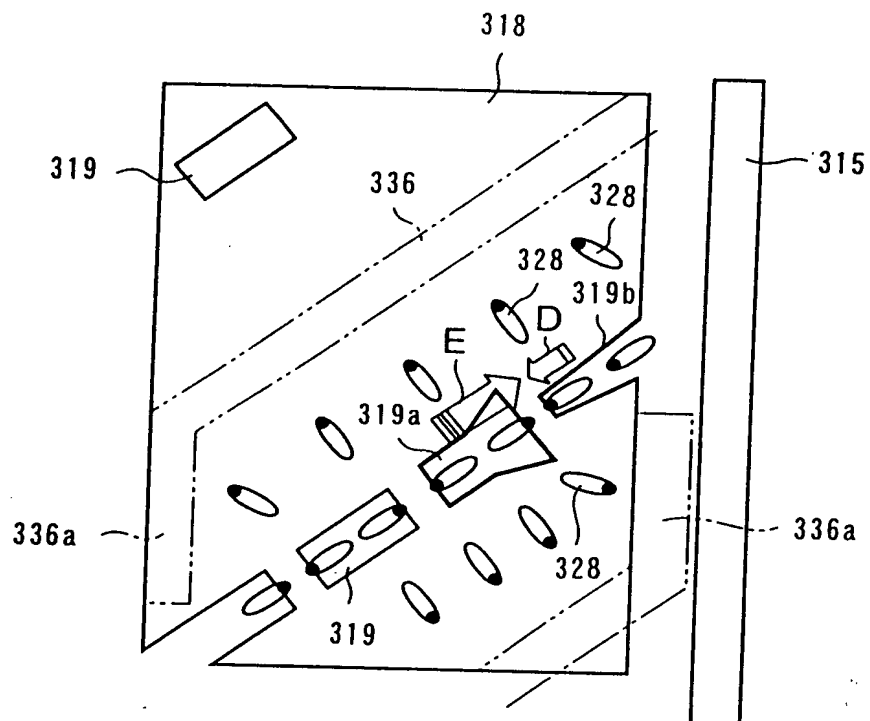


FIG. 53

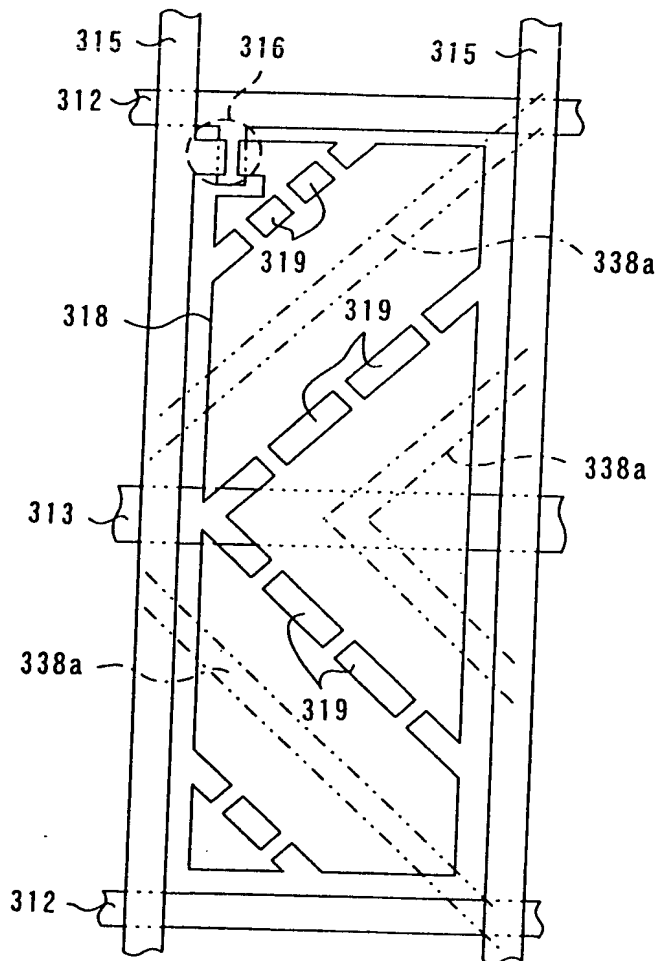


FIG. 54

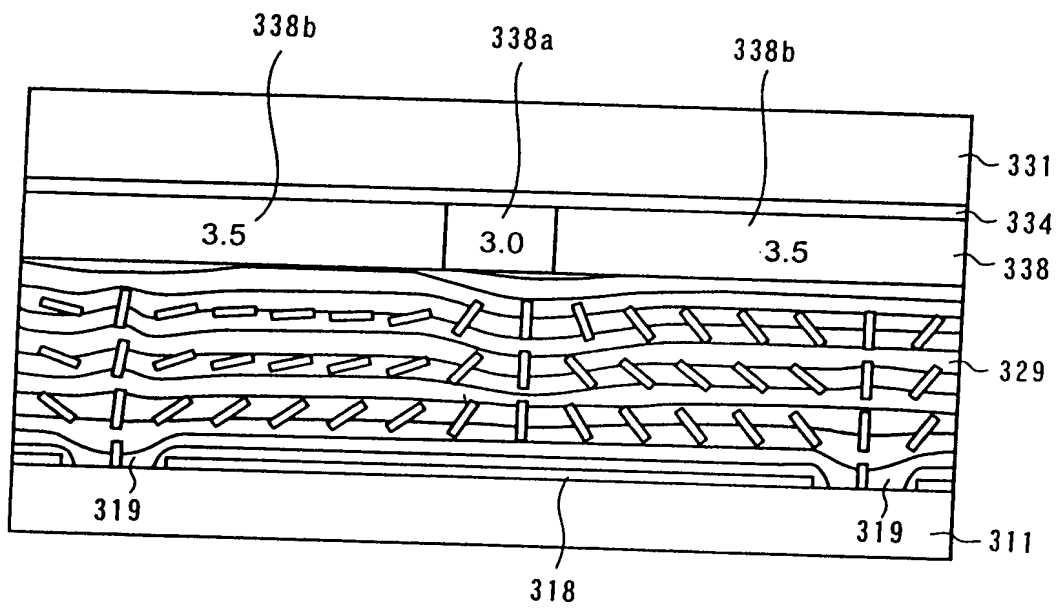
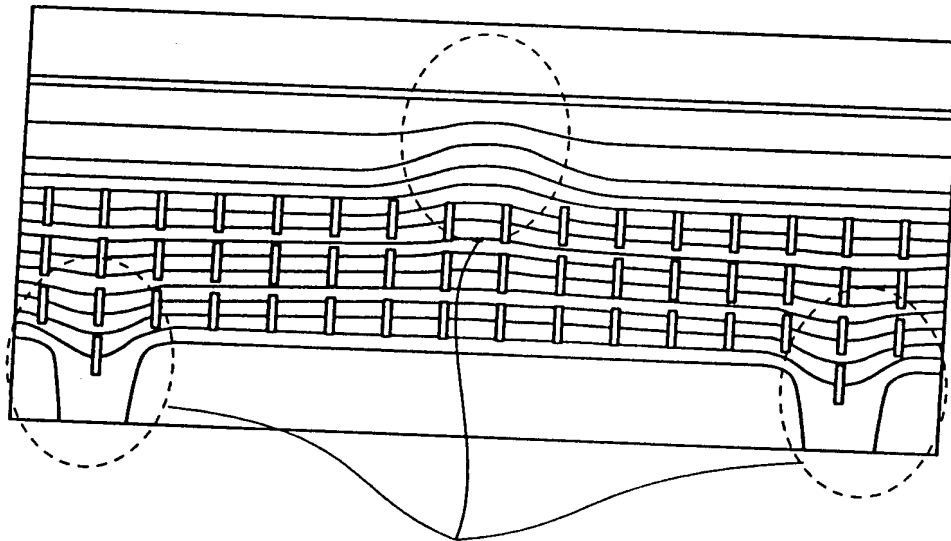


FIG. 55



The equipotential lines are pushed out outwardly from the liquid crystal layers.

FIG. 56

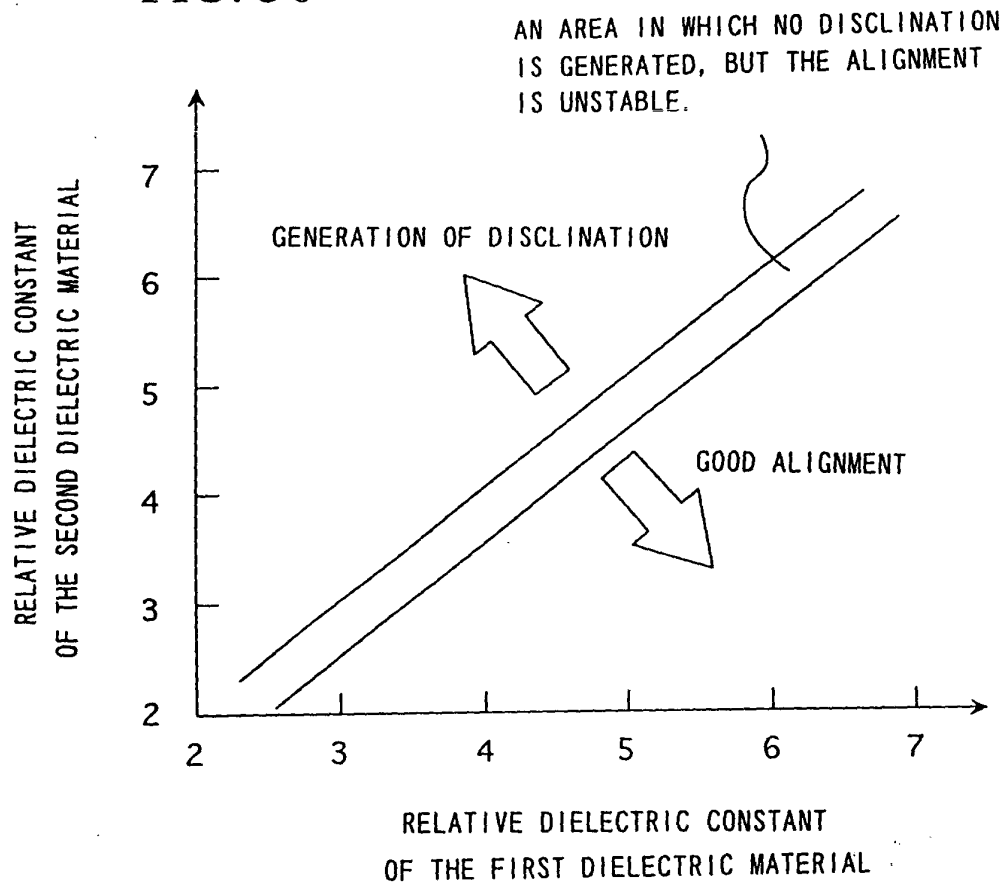


FIG. 57

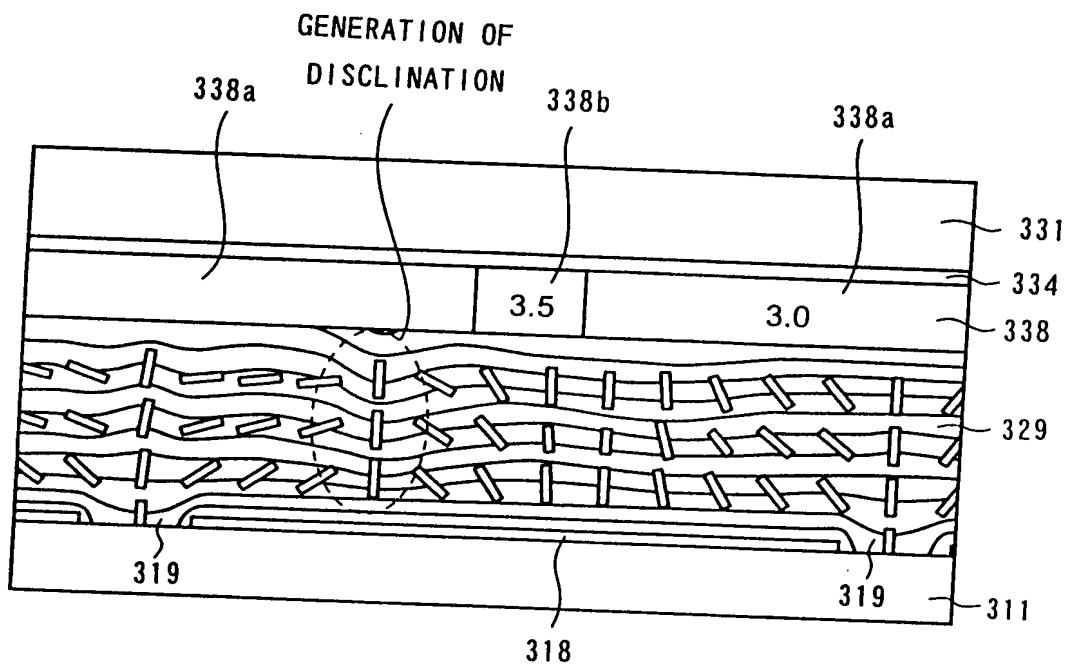


FIG. 58A

FIG. 58B

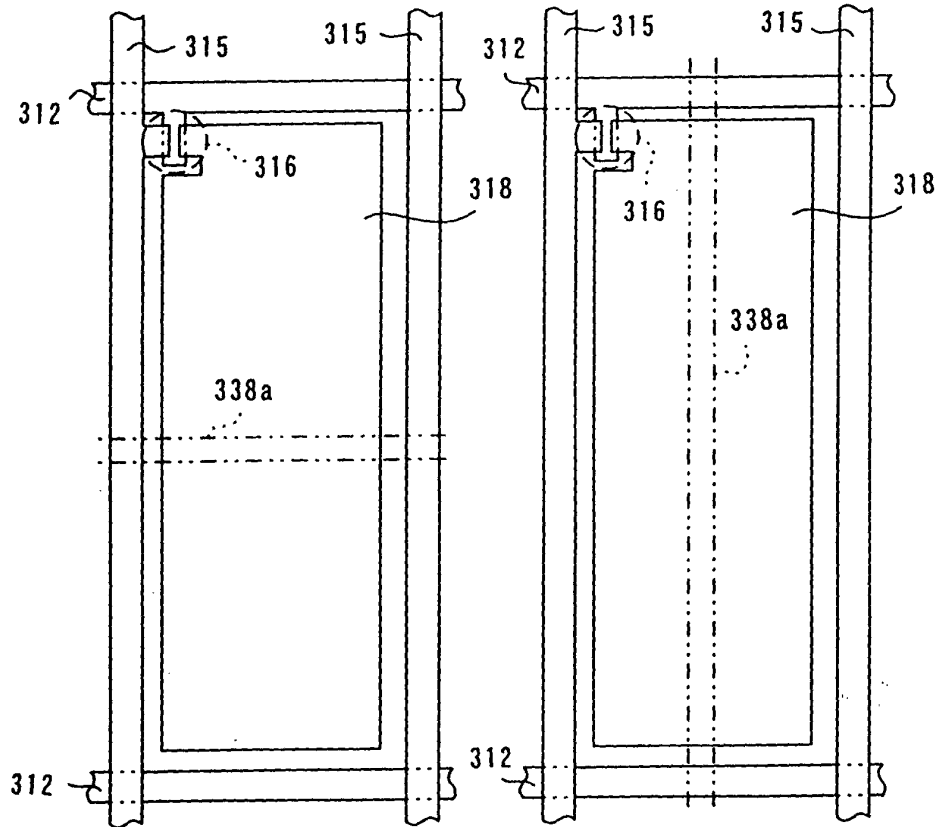


FIG. 59

